

greenideas

HOW TO

Get back to BASICS

Practical ideas for your
garden and home

Your
food
scrap
dilemmas
solved

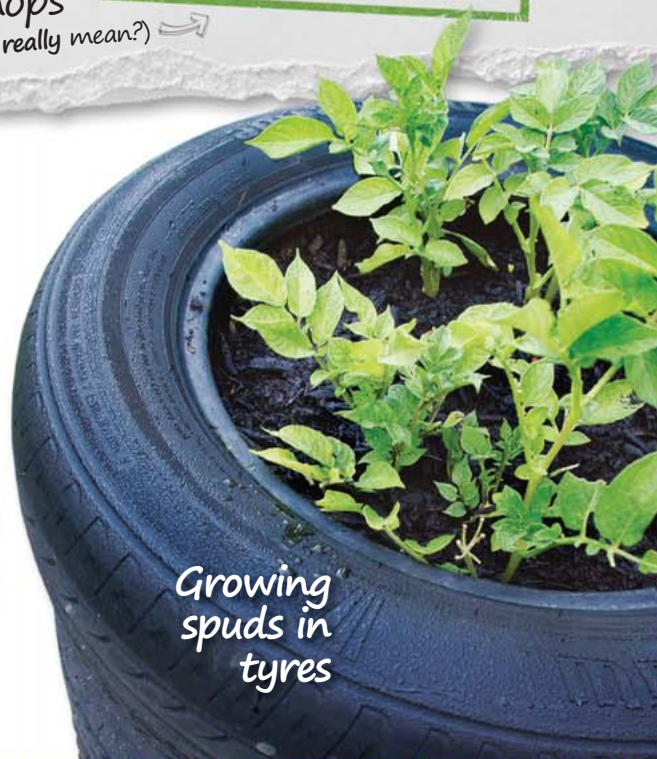


STEP-BY-STEP
Preserving
fruit at home

How to avoid
greenwash in
the shops
(What does this really mean?)

ECO FRIENDLY

Natural
swimming
pools



Growing
spuds in
tyres



RECYCLE THIS
MAGAZINE



Guide to
eco funerals

PLUS EVEN MORE INSIDE...

**EASY WAYS
TO BE GREEN:**

- How to install a low-flow shower head
- Natural fake tans
- 13 upcycling ideas
- How to choose the best fridge



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Niki Bezzant, Editor-in-Chief of
Healthy Food Guide Magazine



Gurgling tummies and irritable bowels

Anna Richards, Registered Dietitian



Understanding food allergy and food intolerance

Anna Richards, Registered Dietitian

Successful gluten free baking – you CAN do it!

Neville Green of GFME
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Diagnosing and managing IgE mediated food allergy

Penny Jorgensen, Advisor to Allergy NZ



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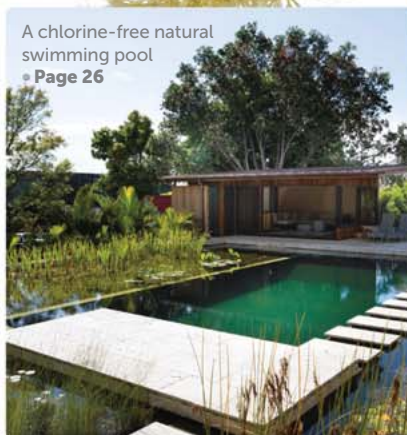
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greenideas

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editor's letter

Value is a funny word – we use it in lots of different ways. You can *have* values. You can *get* value – as in getting a bargain. Marketing people even talk about *adding* value.

This is a pet hate of mine. Usually 'adding value' means adding useless details to something so it can be sold for more money. You know – like 2 cents worth of water sold for \$5 because the bottle has a silly mouthpiece, a dash of flavour, and maybe some 'witty' writing on the label. I'm convinced around 99.6 per cent of the world's problems are caused by 'adding value'...

By contrast my favourite way to think about value has to do with the things we really cherish.

This is the time of year I reflect on what I truly value in life (and weirdly, witty water bottles never seem to feature).

For me, the really valuable stuff involves getting back to basics – cherishing experiences or things that are simple and honest – and this is something we've tried to bring to this issue of *Green Ideas*.

I reckon simple experiences like preserving your own fruit (there's a step-by-step guide on page 34) are less about the product you get at the end, and more about the satisfaction of getting back in touch with the real world (though of course having your own bottled apricots to eat with icecream in the middle of winter seriously rules).

And likewise growing your own food, creating a beautiful garden, or even just knowing how to find authentic green products by avoiding all the deception of the commercial realm (see our guide to beating greenwash on page 22), all help bring us back in touch with the basic things in life. Things like honesty, integrity; apricots and icecream: that's the stuff that really adds value.

Greg Roughan

Editor, *Green Ideas* magazine

You can hear more from the editor by signing up to our free monthly e-newsletter. Simply visit www.greenideas.co.nz/newsletter/subscribe

THE GREEN IDEAS PHILOSOPHY

We believe that as a society we need to live more sustainably. It is our aim to bring you relevant, practical and up-to-date information and ideas on how we can do this. In doing so we are often navigating a minefield of technical and social issues, and vastly differing opinions. We research all the information we can find on a subject, and bring it to you applying the below principles:

SCIENCE

Many of the environmental issues discussed in *Green Ideas* are the subject of strong debate. Our policy is to reflect broadly accepted science when discussing debated issues and to seek the advice of experts. We acknowledge however that environmental thinking needs vision and imagination, so we will also bring you voices from beyond the mainstream when these are based on sound principles.

INDEPENDENCE

Green Ideas articles are independently written. We don't let advertisers influence what we write in any way, and this swings both ways: the content of advertising in the magazine is not vetted or endorsed by *Green Ideas* – advertisers must of course comply with the Fair Trading Act and other relevant legislation. If we believe a product is not living up to environmental claims, we will not be afraid to say so editorially. Likewise where we think products are contributing to a more sustainable future, we believe you'll find that information useful, and will let you know.

PRACTICALITY

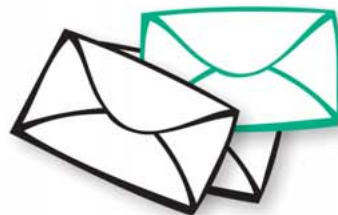
It is all very well having lofty goals and theoretical outcomes, but on a day-to-day basis these can easily be forgotten if they are not practical for you and the everyday consumer. It is our aim to provide simple, practical ideas and advice so that we can all make a little difference. Lots of little changes will add to big change.



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SEE PAGE 41



your letters



Let us know what's on your mind. The best letter next issue
WINS a Green Kleen home and car cleaning pack valued at \$155

Straw planting

Having just finished building a house on our lifestyle block my next step was to get vegetables and other edibles growing to get us on the way to being self-sustainable.

Unfortunately we hit a bit of a stumbling block as I wanted raised beds for my veges, mostly to make growing them a less daunting task and to protect from rabbits, and we just didn't have the time or the funds to build them.

After a bit of searching on the internet I came across a method of planting directly into straw bales and decided to give it a go.

We sourced some pea straw bales and I began the process of preparing them for planting, which just involved soaking them with water every day for a few days and adding some fertiliser. The bales then get really hot as they start to decompose on the inside and then cool down and at that point you can plant directly into them.

I think this is a fantastic way to garden with many advantages, it's not permanent so you can change where you plant in the next years or can even have them in small gardens or while renting, the bales hold their shape and warmth thanks to the hollow straw and best of all, after a couple of seasons you can just pile the used bales up and create a compost pile for other garden beds.

Dominique, Blenheim



THIS MONTH'S WINNING LETTER



Real value

After reading the greener gift guide in issue 13 I realised the wisdom in the Christmas gift my brother gave my kids last Christmas. As a GP he is often short of time, so a week before Christmas he said to his nephews, "I'll give you \$40 for Christmas but you have to buy the gift; it must be useful and second-hand is preferable." He said he would inspect the gifts in a week and if he approved he would give them the money. My three sons filled an awesome week visiting nearly every second-hand shop in the South Island, attempting to spend the \$40. Only one managed to spend it all in the week. All three however did manage to purchase an amazing array of useful, wanted items. What started as an easy way out for a time-poor uncle ended up providing the most useful, talked about and planet-friendly Christmas gifts.

Sarah, Nelson

The best letter this issue wins
a \$150 LED Bulb voucher
from Powerbusters

WORTH
\$150!



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on www.facebook.com/greenideasnz or www.greenideas.co.nz.

All letters and other material forwarded to the magazine will be assumed intended for publication unless clearly labelled 'not for publication' and the editor reserves the right to edit, abridge or decline letters without explanation.

the green future

The best sustainability news
at home and abroad

HOT TRENDS

Kiwis growing food on street-side berms

When Auckland Council stopped mowing the grassy berms outside houses to save money, Richard Green decided to bend the rules and use the land for something better than scruffy grass. He and his partner Imogen put in an edible garden with tomatoes, corn, herbs, cucumbers and more – and now the little plot has become a focal point for the street, with neighbours dropping by to swap veges, nab some basil – or just chat while Richard waters with a wine in hand. Richard says most people ask if there's a problem with food getting pinched, as the garden is unfenced and out the front, yet he reckons making it freely available is half the point. "It is a real community builder, which is what a city as diverse and spread out as Auckland needs. Communities together make for better living for everyone."



1000 ↗ free fruit trees to be given away in Auckland

Schools, early childhood centres and community gardens are encouraged to register by 15 June at www.fruittrees.org.nz/signup. Individuals who want a free fruit tree on the grass verge in front of their house are also encouraged to register.



AT HOME

New growing appliance for the kitchen

Want fresh food with no air miles – but don't have the green thumb? This completely automated indoor growing appliance could be for you. Called the Urban Cultivator, it uses a computer to control light and watering cycles and even comes with a handy chopping block top surface. Check out www.urbancultivator.net to see more.



DID YOU KNOW?

Whale poo fights climate change

You might think of them as gentle giants, but the truth is whales are hard at work each day fighting climate change by...well... pooing in the oceans. New research has confirmed that whale poo is rich in iron, which plankton need to grow. Plankton absorb huge amounts of CO₂ from the atmosphere, which when they die sinks to the bottom of the ocean, where it can't contribute to global warming. So more whales means more poo, more poo means more plankton, and more plankton means a safer climate.

100 metres

The length of the solar panel cycle path being tested in Norway. The country has ambitious plans to coat its roads in tough, transparent solar panels to generate huge amounts of clean renewable energy.



SUSTAINABLE STYLE

Designer seaweed furniture

Proving that you can live elegantly while being green, two Danish designers have created a striking new material from seaweed and paper that can be moulded and set to create beautiful furniture and homeware. Jonas Edvard and Nikolaj Steenfatt created the soft cork-like material to raise awareness of the world's limited resources and show the possibilities of renewable, local products. Their designer furniture can simply be composted in the garden at the end of its life, and takes its warm colour from natural seaweed hues.



PHOTO: EMIL THOMSEN SCHMIDT

New York bans fracking



Noticed how cheap petrol is lately? It may be easy on the wallet, yet there's a dark side to all that affordable fuel. Prices have dipped thanks to the huge amount of oil that the United States has extracted using the controversial process known as fracking. However fracking can contaminate water supplies and release the greenhouse gas methane, which is why New York has just become the first state in the US to ban it. "There are serious questions about public health", said governor Andrew Cuomo.

WIN a Natural Instinct care pack



WORTH \$154.85

Win a fabulous care pack worth more than \$150, and enjoy the fact that none of the products have been tested on animals, and that all are vegan-friendly and use recycled packaging. Natural Instinct sets the standard by excluding over 400 ingredients that are proven harmful to you and the environment.

Go to www.greenideas.co.nz to enter the draw. There are three prize packs of 11 products to be won.

Competition closes April 6, 2015

Underwear from Christmas trees

Thrown out your old Christmas tree? It could already have been turned into fancy lingerie. A French designer has released a range of women's underwear made from recycled pine needles. Sophie Young's Do You Green range uses a kind of viscose similar to the fibre made from bamboo (and no it's not prickly or pine-scented). See www.organic-lingerie.com



WORLD NEWS

Pope tackles global warming

Pope Francis is creating a stir with the announcement that he will mobilise the world's 1.2 billion Catholics to fight global warming. World leaders are meeting at a critical climate summit in Paris in December, and the Pope intends to pressure them via their Catholic populations to reach a binding agreement to cut emissions. A major document, called a papal encyclical, will be distributed to the world's bishops and priests this year setting out the official church position on climate change. Because the world's poorest people will suffer the worst consequences of warming, insiders believe the Pope will state that Catholics now have a moral duty to support climate action.



45%

The cut Barack Obama wants to make in US methane emissions by 2025. Methane is one of the most potent greenhouse gases.



TECHNOLOGY

Electricity-tree

Like the idea of wind power, but maybe not near your home? Using turbines to generate electricity is crucial if the world is to avoid the worst of climate change – however many people dislike the noise and visual impact of the enormous windmills used.

One promising solution is a generator called the Wind Tree. With its 72 rotating turbine 'leaves' it can generate electricity silently, at much lower wind speeds than normal windmills – and without creating an eyesore – making it ideal for urban environments.

Its makers claim that, despite creating less power than conventional blade turbines, it works out better in the long run because it can catch lighter breezes to generate power on a greater number of days.

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ONLINE

Blogs we love

If you ever want to feel great about what young New Zealanders are doing in the world check out One to Watch – a blog by sisters Kate Laurence (above) and Emily. Each post features a Kiwi doing something inspiring – we especially loved the interviews with eccentric eco-designer Stephen Mushin, and marine researcher Libby Liggins. See www.one-to-watch.com and sign up to their newsletter for a regular dose of can-do positivity.



TRANSPORT

Green car that steers itself

When your car doesn't need petrol, doesn't make fumes and doesn't need a driver, is it even a car? That's a tough question that you'll have plenty of time to ponder as you chill out in the incredible new concept car, the F015 Luxury in Motion. Mercedes-Benz unveiled the hydrogen powered, self-driving vehicle at a recent Consumer Electronics Show, giving a glimpse into a sit-back-and-relax future of personal transport. Using fuel-cell technology, it will be capable of running on fuel made from domestic garbage, with nothing but water coming out of the exhaust pipe.



574 tonnes

The amount of plastic thrown away each day in India's capital city, Delhi. However that may change for the better: a team of Indian scientists has found a way of turning plastic bags into car fuel.

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HOT TRENDS

Build your own bamboo bike

Here's one for the cycling fan in the family: bamboo – the ultimate sustainable, renewable material – is now being used to build high-spec bicycles by a London-based group – and they're passing their knowledge on. Through weekend workshops and by selling DIY kits the Bamboo Bicycle Club has helped hundreds of people discover the satisfaction of designing their own bespoke ride. Bamboo is strong, flexible, cheap and widely available – and has been used to build frames for every kind of bike, including mountain bikes, tandems, BMX styles and electrics. See more at www.bamboobicycleclub.org. 



3.5 million

The number of meals donated to someone in need by new Mexican restaurant franchise Zambrero. For every meal purchased the company funds a meal for someone in the developing world. Four Zambrero restaurants have opened in New Zealand, with three in Auckland and one in Wellington.



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home upcycling

Green Ideas email newsletter readers share some of their creative upcycling ideas



1

"My daughter (Celeste, 7) and I loved the look of the chairs from the 'ales and nails' story a couple of issues back, so we designed and built some ourselves. They are awesome for relaxing with a book and a drink on the deck."

Daryl and Celeste



WINNER: Daryl and Celeste receive a free Mrs Roger's spice pack (their clever packaging is designed to be upcycled into seedling pots), plus a bonus batch of seedlings to help get their garden started.



2

Imogen from Passion PR reckons their pallet desks – made for them by their director's husband, along with their 'passion wall' – are some of the best she's ever worked on. "The gaps in the pallets make for these great little slidey drawers where you can store all sorts of things."



3

"Tomato punnets are perfect little greenhouses for my seeds!"

*Trudy Renner
Falconer*



4

Peter Thompson of Lyall Bay in Wellington made this pizza peel from an old tennis racquet and a chopping board.



5

Editor Greg Roughan made his daughters this toy oven for Christmas using an old bedside cabinet.



Search for "toy oven" at www.greenideas.co.nz for the step-by-step tutorial he used



7

"We have upcycled old apple bins into mini-greenhouses. We live in the Motueka area, so there are plenty of orchardists with spare or broken bins. We cut the bottom off and lined them with plastic sheets."

Martina, Motueka

6

Readers Alec and Carolyn Mann created this coffee table from two pallets, and spruced up an old table and chair set they found on Trade Me.





8

"I love recycling/upcycling and have just started my journey as a newbie gardener. Here are some old colanders I lined with coconut fibre and planted with annuals. I also painted an old rickety wooden ladder and some worn out shoes were also given a lick of paint then planted up."

Clisa Tait



9

Peter from Wellington also made this clever slat bed out of macrocarpa sleepers and discarded skis he found at the dump. "If you want to make your own, most tip shops have a good supply of skis – they're flexible and perfect as bed slats. The materials cost around \$150."



10

"I read about various projects for building with pallets and got super inspired. I made a bar leaner with four throne-style chairs, a heap of planter boxes and a set of deck chairs."

Mel Powell



11



"I used waste materials to build a trailer for my electric bike – an old pram for the frame, an old plastic recycling crate and some leftover aluminium tubing from a broken gazebo. I try to minimise car use by taking the bike whenever possible and the trailer makes it possible to do all sorts of things, including grocery shopping."

Steve Schoultz

12

"Our old bath is now home to pumpkin plants."

Linda Jordan



13

Search 'upcycling' for more ideas on www.greenideas.co.nz

"Here is the herb garden I made out of an old pallet, sanded down and stained. I love it!"

Zoe Smith



Share your ideas!

We're celebrating the little things our readers do to live more sustainably because big changes start with small steps.

If you'd like to share some of your own tips, tricks or recipes, email them to editor@greenideas.co.nz (preferably with a photo) and we might include them in the magazine 

If you'd like to receive the free monthly Green Ideas email newsletter, you can sign up at www.greenideas.co.nz

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OXFAM

New Zealand

My dilemma: food scraps

QUESTION

"I'm installing a new kitchen and was thinking about getting a sink waste disposer for food scraps. Are these okay for the environment? What is the best way to deal with this kind of waste?"

Rebecca H



ANSWER

Materials Scientist Dr Michelle Dickinson – aka Nano Girl – replies:

You might not realise it, but the way you choose to dispose of food scraps – such as potato peelings, leftovers, or stale bread – has a direct effect on global warming.

Food scraps make up 40 per cent of the household rubbish New Zealanders send to landfill, amounting to 258,886 tonnes per year. When food waste rots inside landfill it releases methane, a potent greenhouse gas with a climate-warming effect more than 20 times that of CO₂.

Currently landfill methane accounts for 4 per cent of New Zealand's total methane emissions – yet much of this could be avoided simply by keeping food scraps out of the rubbish bin.

There are several ways to do this, including installing a sink waste disposer to grind and wash away scraps; using organic waste pick-up services if they are available; or setting up a home composting bin or worm farm.

Which option is best?

Although it may seem clean, grinding up your scraps in a waste disposer is far from the greenest option. Firstly it takes a lot of water just to wash your ground scraps down the drain, and from there the waste flows through to a water treatment plant where it accumulates, requiring even more water and energy to filter out and scrape off, before being sent to landfill – which is exactly what we want to avoid.

Alternatively, if you are one of the lucky few living in the small number of council regions that provide regular organic waste collections (including Christchurch City, Kawerau District, Timaru District and Auckland) then this is a good option. The service provides degradable bags or wheelie bins which are collected and sent to a commercial composting plant – a good compromise for those who want the convenience of throwing waste away. However, there is an environmental trade-off due to the fossil fuels needed to power the weekly truck pickups from




	SINK WASTE DISPOSAL	COUNCIL ORGANIC COLLECTION	HOME COMPOSTING
PROS	<ul style="list-style-type: none"> ✓ Easy to use, doesn't take up space in apartments, odour free. 	<ul style="list-style-type: none"> ✓ Convenient. ✓ Can handle 'compostable' plastics. ✓ Doesn't encourage rodents. ✓ Creates a valuable green product and jobs out of waste. 	<ul style="list-style-type: none"> ✓ Can be as simple as a corner set aside in the garden. ✓ Simple kits available for apartment dwellers.
CONS	<ul style="list-style-type: none"> ✗ High water usage and once waste is collected at water treatment plant, it's still sent to landfill. 	<ul style="list-style-type: none"> ✗ Requires fossil fuels to power trucks for home collections. ✗ Not available in all regions. 	<ul style="list-style-type: none"> ✗ Needs a small amount of space for compost bin, plus garden to put soil into.

your home, which will only increase as councils expand this service.

The best environmental solution for kitchen scraps is to set up a home compost system in your garden. This can be a simple corner where the scraps are piled up and allowed to degrade naturally, to a more complex worm farm which breaks down the scraps faster, resulting in a nutrient-rich soil for your garden. These are also fun to set up with children, teaching them about nature, the environment and reducing waste all in one worm-filled box.

There are several indoor composters available too, known as bokashi

buckets. These are designed to be odourless and come as a kitset with an activator powder for under \$100. The remains should be dug into soil.

Many local councils offer free courses to get started and teach the basics of the different types of composting so you can pick the one that best suits your needs. 

Sources: www.wasteminz.org.nz www.mfe.govt.nz www.watercare.co.nz

Build a \$20 worm farm
Search 'worm farm' at
www.greenideas.co.nz for a
step-by-step guide

DID YOU KNOW?

To motivate Aucklanders to reduce the amount of food waste in their landfill bins, Auckland Council is planning to start charging for bin collections. A new bin for compostables will be given to all households in the region. This, plus the recycling bin will be collected for free, but there will be a charge for pick-up of the red 'landfill' bin. All the more reason to get better at recycling and composting!

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renewing northland

Transforming a run-down cattle farm into an eco-business has been a social and economic boon for this remote corner of the country. Greg Roughan meets the couple taking a punt on Pataua



Water doesn't
leave the property
without settling in
the wetland system
the pair created,
where it's filtered
by plant life



At first glance it seems a typical Northland town: no jobs, no money; endless sunshine. Paint peeling off old wooden houses. Kids riding half-wild horses on the beach, barefoot and happily unaware of the poverty trap adulthood will spring on them.

Yet the tiny coastal town of Pataua North, thirty minutes' drive from Whangarei, has a surprising secret. Here one couple's restoration project has transformed the community, economy and environment – taking a farm that provided a job for one man and turning it into a sanctuary that employs 14 people fulltime, and more than 20 during peak season.

The source of this new prosperity? An eco-friendly honey that graces high-end stores around the world, including the prestigious Harrods of London.

How they did it

When John Craig and Anne Stewart bought the 300 hectare cattle farm, streams on the degraded land drained into the ocean and the local estuary, with cattle “shitting in the water before it hit the beach”, as John puts it. Now, nothing reaches the sea without being filtered by an extensive wetland the pair created.

Meanwhile the land has been stabilised with more than 250,000 native trees they grew from local seeds in their own nursery. These have in turn regenerated an entire ecosystem, bringing back 68 bird species, of which 23 are either endangered or at risk – including extremely rare creatures such as the Australasian bittern (fewer than 900 in New Zealand) – while an egg found on the property suggests that kiwi are either nearby or have established themselves on the property. Constant predator trapping keeps the endangered animals safe. ➔



FEATURES



Creating a green economy

The regenerating forests – especially the manuka scrub – now feed the bees that provide the economic backbone of Tahi Estate. Honey from their factory is sold both in New Zealand and exported to Japan, China, Belgium, Holland, the US and the UK. Yet the estate doesn't have all its green eggs in one basket.

The newly beautified landscapes provide a backdrop for three eco cottages that overlook the white surf beach below: two offer luxury 4.5 star accommodation, while the other is a more affordable bach-style retreat.

Anne also breeds and sells dressage and eventing horses on the hills above the estate – and teaches local children how to ride. An elegant café rounds out Tahi's attractions, feeding and caffeinating the holidaymakers that visit this sleepy spot, and providing one more draw card for a town that is literally at the end of the road.



Better lives through conservation

Taking a straight-forward beef farm and creating a complex eco-venture might sound like risky business, yet John and Anne aren't short on experience. She used to be in the horticulture business, ran the MBA course at the University of Auckland, and was also a senior lecturer in marketing – while he was professor of environmental management at the University of Auckland for 33 years.

In fact John was among the handful of visionaries who replanted Tiritiri Matangi island in 1984 and eradicated its rats and stoats – a feat that two years ago helped earn him the New Zealand Order of Merit.


These days the formerly barren island is one of the jewels of the

STAY AT TAHI

You can stay on Tahi Estate by renting one of its eco cottages. Each of the luxury bungalows collects rainwater for drinking and household use, while seasonal organic vegetables, fruit, and honey from the property make your visit comfortable and sustainable. For details see www.tahinz.com

Alternatively you can rent the economy surf cottage on the estate by searching for 27384 at www.bookabach.co.nz

Hauraki Gulf. An internationally renowned breeding ground for endangered animals such as kiwi, takahe and kokako, it attracts 30,000 visitors each year, and is also helping restock the mainland with rare birds such as kaka and red-crowned parakeets.

Yet that achievement may eventually be overshadowed. That's because today, thanks to John and Anne's efforts, the kids of Pataua North still grow up riding half-wild horses on the beach in the endless Northland sunshine – but they'll also grow up seeing the possibilities of a green economy, and have the prospect of finding jobs in the paradise they call home. 

Renovated cottages offer luxury accommodation at Tahi



LOVE YOUR COAST?

Photo thanks to Kurt McManus Photography, www.kurtmcmanusphotography.com



Learn more about keeping our beaches clean,
find and create events, and share your results.

www.loveyourcoast.org



are you being greenwashed?

Beware, beware, the dark art of greenwashing – marketing products as good for the environment when they're not. Greg Roughan shows you how to spot a fake eco product – and find a real one

Fake free range eggs, 'compostable' rubbish bags that aren't, and eco-friendly taxis that pollute as much as any car... businesses selling all of these questionable eco products and services have been busted recently in New Zealand – with fines, bad press and even home detention for the perpetrators. And that's just the tip of the iceberg.

Claiming a product is good for the environment when it's not – known as 'greenwashing' – is on the rise. As more people decide they want to spend their money in ways that help (or in the least, don't harm) the environment, more unscrupulous companies have cashed in by making vague, misleading, or just plain false environmental claims on products.

This is illegal in New Zealand under the terms of The Fair Trading Act, which is enforced by the Commerce Commission. However the Commission is limited, as it only responds to complaints, rather than actively seeking out greenwashers.

In practice this means the job of looking out for greenwashing falls to us, the general public – with plenty of greenwashing going undetected and unpunished.

And that's a bad thing. Because not only does greenwashing rip off consumers, who have a right to get what they think they're buying, it also undermines the good companies that are trying to bring genuine change. After all it's hard to sell a great eco-friendly product if your competitor offers a phoney version for half the price...

So how do we fight it?

The best way is to develop a keen nose for phoney marketing – and use reputable labels and standards as a guide. And okay, with hundreds of labels out there (both dubious and legit) that can be daunting, but that's where our guide comes in.

To avoid becoming a victim of greenwash keep your eye out for the questionable phrases and tactics below, and use the list of credible eco labels as a guide when you shop. The list is by no means complete, but you'll find it covers many of the buying decisions we make every day in the supermarket, shops and online.

THE CLAIM

FREE RANGE

This phrase has no legal definition in New Zealand, and meat and eggs labelled free range can be produced in ways that are only loosely so. If you're concerned about animal welfare, you have several options. You can choose products with organic certification as these systems have the most robust rules around welfare, or you can look for the SPCA Blue Tick.

You can trust **SPCA Blue Tick**

Where you'll see it: On eggs, pork, chicken and turkey meat products made under high animal welfare standards.

What's it about? This country still has lax animal welfare rules around egg and meat production. Choosing the SPCA Blue Tick is a great way for shoppers to vote with their wallets for kinder farming practices.

Why you can trust it: The SPCA is the world's oldest and most influential animal welfare organisation – the New Zealand branch has been in action for 130 years.



Search 'happy eggs' for brands you can trust on www.greenideas.co.nz





! THE CLAIM

Organic

Farming without synthetic pesticides and fertilisers is a good thing, but the word 'organic' means different things to different people and gets thrown around wildly – only trust it if it's backed by a reputable organic certification. And use your judgement. Does it really make a difference if your shampoo has 2 per cent organic pineapple essence added? Probably not.

✓ You can trust

Assure Quality Organic and BioGro

Where you'll see them:

On everything from vegetables to meat, wine and baby food.

What's it about?

Organics can seem like a first-world fad, but there are compelling reasons to support it. Organic food production is far better for the environment, and much safer for the people involved. Certified products are created without chemical fertilisers, pesticides and genetically modified organisms. There are also strict rules around animal welfare and social responsibility.

Why you can trust them: These are the two big organic certifiers in New Zealand. AssureQuality is a 100 per cent government-owned commercial company, while BioGro is a not-for-profit registered charity. Both are audited externally, and accepted as international-level organic standards.



! THE CLAIM Forest (and wildlife) friendly

Frogs, butterflies, flowers sprouting from exhaust-pipes... these common scenes on packaging give a vague sense that the product doesn't harm the natural world. Don't be fooled: if you care about the big and related issues of deforestation and species loss (for example in Indonesia where forests teeming with wildlife are clear-felled then turned into palm oil plantations), then choose paper and wood products that are certified sustainable.

✓ You can trust FSC and PEFC

Where you'll see them: On products made from trees that have been harvested sustainably: toilet paper, printer paper, cardboard, timber, furniture, etc.

What's it about? Forests are the lungs of the planet, turning climate-warming CO₂ into the oxygen we breathe – and they support millions of other life-forms including iconic species such as wolves, tigers and orang-utans.

Why you can trust them: FSC and PEFC are global, not-for-profit organisations. Between them they keep tabs on around 450 million hectares of trees.



! THE CLAIM Compostable plastic

A new generation of plastics – often made from something called PLA, which is derived from corn – are marketed as being compostable or biodegradable. These are often stamped with a plastic identification number 7 and the letters PLA. However not only will these NOT break down in your home compost in any reasonable time (unless it's hotter than 60°C), many won't break down in landfill either. And if you put them in the recycling bin they're likely to be rejected and sent to the dump anyway!

✓ You can trust Recycling numbers 1-6

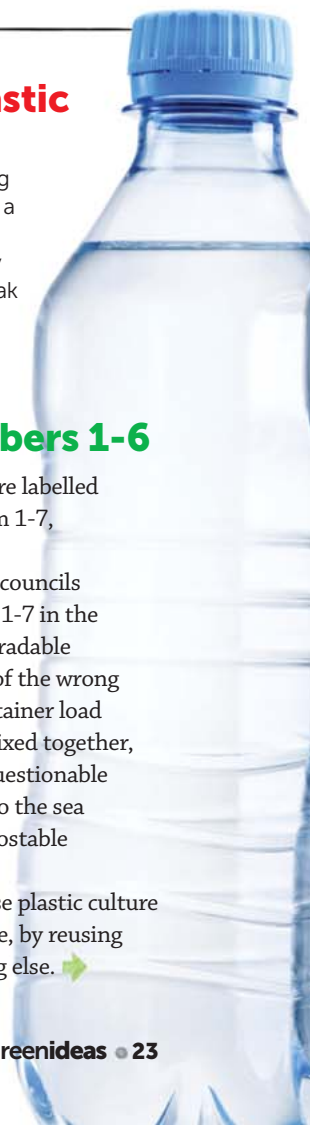


Where you'll see them: All plastics are labelled with an identification number from 1-7, usually on the base.

What's it about? Even though most councils say you can put plastics numbered 1-7 in the recycling, the reality is that biodegradable 7s belong at the dump. Too much of the wrong plastic slipping through into a container load

can ruin the 'good' recycling when it gets melted down and mixed together, making it less valuable. Really, biodegradable plastics are of questionable benefit. The exception is when plastic items find their way into the sea – especially thin films like bags and wrappers. If they're compostable or biodegradable they're much less likely to cause problems.

What's the solution? The best approach is to avoid the single-use plastic culture altogether by choosing glass or paper packaging when possible, by reusing plastic containers over and over again, and recycling everything else. ➔



FEATURES



THE CLAIM

Dolphin friendly

This sounds nice on a tin of seafood, but means nothing without a real certification to back it up.

You can trust



MSC

Where you'll see it:

On sustainable seafood products.

What is it about?

Global fish stocks are being

depleted to the point of no return. Yet if everyone demanded certified sustainable fish it would guarantee the future of this valuable food source (and the simple pleasure of a day out fishing), while limiting bycatch of vulnerable species such as dolphins, seals, sharks and seabirds.

Why you can trust it: Despite being criticised by some, the facts about MSC speak for themselves: it's an independent, international non-profit charity with robust and transparent processes. And they aren't shy about retracting their approval, even if it's not the fishers' fault. For example, if a sardine fishery could be fished indefinitely and still stay healthy MSC would still withdraw approval if, say, a rare dolphin needed the food source.

Search 'tinned fish' for brands you can trust on www.greenideas.co.nz

THE CLAIM Carbon footprints

From airlines to taxi firms various companies like to talk about how they take climate change seriously by reducing their footprint and planting trees. This is great, but the proof is in the pudding: has someone outside the company checked the claim?

You can trust CarboNZero

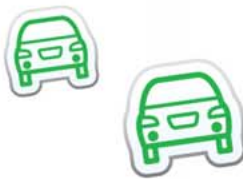
Where you'll see it:

On organisations or events with no carbon footprint.

What is it about?

Climate change from greenhouse gases is the single most pressing environmental issue of our time, so reducing CO₂ output to zero is impressive and important. The CarboNZero label shows a company has measured its output, reduced what it can, then offset the rest. There's also a related scheme called CEMARS for those who have started measuring and reducing emissions but aren't yet at zero.

Why you can trust it: The schemes are run by Landcare Research NZ Ltd, a government-owned Crown Research Institute. They're externally audited and accredited by something called the International Accreditation Forum.



THE CLAIM Ethical

There's a big movement towards supporting ethical trading, especially with developing countries. This ensures workers there get paid fairly and treated well. However companies in New Zealand have been known to put their own 'ethical' stickers on their products, despite questions being raised about their practices

You can trust Fairtrade

Where you'll see it: On products from developing countries – coffee, bananas, chocolate, etc.

What is it about? The huge buying power of large companies can force farmers in developing countries to work for a pittance, in dangerous or environmentally unsound ways, and with no guarantee of regular income. Choosing products with the Fairtrade logo avoids this kind of abuse by ensuring farmers get paid a guaranteed price, plus extra for things like schools and medical clinics.

Why you can trust it: Fairtrade International (FLO) is a worldwide non-profit organisation with 25 member countries including an Australia-New Zealand branch. FLO sets the rules, then a separate organisation does inspections and issues certifications – it's a "third party" system that keeps everything clean and above-board.





OTHER CLAIMS

Natural A vague word that guarantees nothing in the way of safety or eco-friendliness. After all snake venom, crude oil and cyanide are all natural products.

Recyclable It's *able* to be recycled? Big deal. It's much more impressive if it's already made from 100 per cent recycled material

Free from Free from artificial colours, flavours, gluten, palm oil, tiger blood, radioactive waste... you get the picture. Sometimes 'free from' is used to imply that competing products contain dodgy ingredients when they don't – or a safe ingredient is actually scary. A phrase worth taking with a grain of (iodine-free) salt.

AND WATCH OUT FOR...

Poster campaigns High-profile campaigns to save fluffy animals are all well and good, but ask yourself if it reflects the company's core values, or if it was run out of the marketing department. Short-term charity projects by corporates are no substitute for the kind of steady funding that proper conservation and social work need – and often mask heavy cuts in the government departments that normally fund them.

Vague ingredients Non-food items generally aren't required to list their ingredients, but these days many brands choose to be upfront about what's in them. Phrases in an ingredients list like "gentle cleansing agents" should ring alarm bells



You can trust

Environmental Choice New Zealand (ECNZ)

Where you'll see it: On all sorts of products and services – cosmetics, offices, cleaning products, concrete – you name it.

What is it about? This is NZ's "one label to rule them all, one label to find them, one label to bring them all and in the greenness bind them". It makes life easy for shoppers by unifying the best eco standards under one easy-to-remember brand. It considers the whole life cycle of creation, use, and re-use.

Why you can trust it: ECNZ is a government-owned label – though it operates independently. It's a non-profit charitable trust, all its assessments are carried out by third parties, and it's a member of the reputable Global Eco-label Network. Used by government departments and councils to make eco-friendly buying decisions. ^{gi}



IN BUSINESS?

A new service to help companies avoid greenwashing in their marketing has launched in New Zealand. See www.goodsense.co.nz/learning/green-marketing to learn more

Think you've been greenwashed? You can make a complaint at www.comcom.govt.nz

Which products can we **trust** for our family?



Those with the **most trusted** New Zealand-based ecolabel*



Cert.TM

For household, decorating, building, furnishing and workplace products, even gyms, that are proven better for the planet and people, check the Environment Ministry's ecolabel

environmentalchoice.org.nz



*Colmar Brunton 2014



green funerals

Would you prefer a planet-friendly send-off?

Ellie van Baaren finds out what it takes to go out green

“many sustainable caskets are also objects of beauty that speak of the values of the people they’re designed for”



DEATH. Deeeeeeaaath. It’s a scary word – and one that the funeral industry tries hard to hide. From polished coffins with brass-look handles, to the hearty pink glow of chemical embalming fluid, the typical funeral can be guilty of cloaking our sorrow and reassuring our fears with a veneer that speaks of permanence and perfection – regardless of how it affects the planet.

And for some, that can feel like the wrong way to go.

For the sort of person who spends their life caring about the earth, it seems odd that their last farewell could harm it. Conventional burials leave plastic waste in the ground and leach toxins into the soil – and cremations do the same for the air. Which is why a growing number of people are asking to be sent off in a way that matches their values and beliefs.

Welcome to the world of the sustainable funeral.

What’s wrong with a normal send-off?

Cremation releases a number of harmful substances into the atmosphere – including nitrous oxides, carbon monoxide and sulphur dioxide – and the UK Ministry of the Environment estimates that cremations cause 16 per cent of all UK mercury emissions due to the dental fillings that are burned.

Burials are problematic too. Embalming fluids contain formaldehyde which eventually leaches into the water table – and the depth of a traditional burial can prevent most of the nutrients released by decomposition from returning to the soil.

Both options also require some kind of casket or shroud and the vast majority of people choose a casket made from MDF or chipboard, often with a plastic veneer, polyurethane finish and plastic “metal-look” handles,

THE PERSONAL TOUCH

Funeral directors State of Grace are at the forefront of the sustainable funerals movement in New Zealand, yet the business was born more from a desire to give a personalised experience for grieving families.

When one of founder Deborah Cairns' friends found out she was dying, she asked Deborah to be part of a small group she wanted to help look after her when she died. Despite the challenges involved, it was an experience that inspired her.

"It just opened my eyes to an aspect of life that I hadn't really thought about," says Deborah. "The effect of looking after someone, even just for that short time, was quite profound and I really wanted to explore it."

Deborah's research also showed that the more personal approach to funerals allowed for a much

greener take on an industry that involves large amount of waste, and this realisation lead her to founding State of Grace with friend Fran Mitchell.

It was important to both women that their business was ethically aligned with their values and how they live their lives.

"We all have a greater awareness of our impact on the environment and the world and what we're leaving behind for our children," Deborah explains.

"I guess that's in the back of my mind with my purchasing decisions, my lifestyle and the things I do every day. I always ask myself: 'How's this good for me, how's this good for the world, and how's this good for my children and the people coming after me?'"



Deborah Cairns.

all of which contribute to cremation emissions and burial leaching.

Finally the protective sprays used when producing these caskets include chemicals that have helped land casket manufacturers on the US Environmental Protection Agency's list of top hazardous waste generators.

What is a **natural burial**?

The objective of a natural burial, by contrast, is to ensure the nutrients released by decomposition are returned to the earth without toxic residues leaching into the soil or waterways. This means that the embalming fluids, casket, shroud or liner, and the casket's handles must all be made wholly of natural materials; the graves are marked either by planting a tree, putting a plain stake in the ground or sometimes simply through a GPS reference; and the body is buried as close to the active soil layer as possible (usually less than one metre deep).

In New Zealand, this can only be done in approved sites. Natural burial sites are already operating in Wellington, New Plymouth, Hamilton, Dunedin and Motueka, with a small scale "eco burial" site available at Auckland's Waikumete Cemetery. Other sites in Wanganui and Christchurch are under consideration.

What are the **options for caskets**?

There is now a wide range of eco-friendly caskets – from a simple calico shroud with a solid base that sits inside a traditional casket during the service, to

a wide range of caskets made of lighter, more sustainable products such as pure wood, eco-friendly plywood, recycled paperboard, bamboo and wicker.

Many traditional funeral companies offer sustainable casket options alongside traditional ones and if they don't have one that suits you, you can go direct to one of the local manufacturers such as Auckland-based Return to Sender.

More than just a better option for the earth, many of these sustainable caskets are also objects of beauty that speak of the values of the people they're designed for. ➡



Simple Seamless & Sincere assistance



No embalming is our preference



The Natural Funeral Company has been servicing the wider Auckland community since 2001, and now includes Dannevirke.

We offer a simple, seamless and sincere approach when accompanying you through a funeral experience.

Our natural body care (no embalming) is our point of difference as is our range of caskets from cardboard to liners, plys and solid timbers, baskets and woven wool.



Two Locations:

Ph: 09 361 6080 • Mob: 021 234 5650
chris@thenaturalfuneralcompany.co.nz
71 Colin Shaw Lane, Ponsonby, Auckland

9 Gordon St, PO Box 235,
Dannevirke 4942
Ph: 0800 24 80 24



Woven willow caskets are just one of many sustainable options.

And choosing a more sustainable casket can be cheaper. Traditional caskets can cost anywhere from \$900 to \$5000 while sustainable funeral directors State of Grace stock a range of lightweight caskets priced from \$350 for a cardboard unit, to \$2200 for one created by renowned New Zealand designer David Trubridge.

Is embalming necessary?

Embalming is a process that traditionally uses a toxic combination of formaldehyde, methanol and other solvents to preserve the body until the funeral. At the moment around 90 per cent of people who die in New Zealand are embalmed as a matter of course. However, it's not legally required and not always necessary.

Cooling can do the job just as well – whether the deceased is kept in a cool room or at home with the help of a continuous supply of ice packs. Opting not to embalm can also save you money – traditional embalming can cost anywhere between \$450



“On the outside a greener service doesn't have to look any different to a traditional one”

and \$700, while a cool room, for example, can cost \$50 a night.

If you'd prefer embalming, funeral directors also have access to natural-based, biodegradable and formaldehyde-free embalming fluids.





Simple materials can add an earthy, honest touch.

What does a green funeral look like?

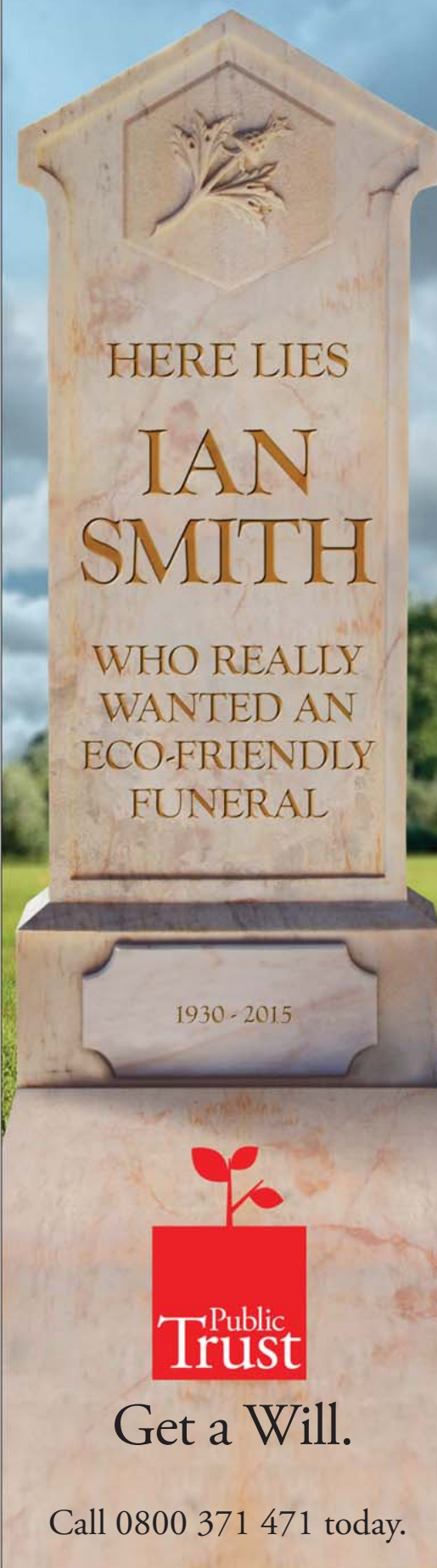
On the outside a greener service doesn't have to look any different to a traditional one. The key is to take the environmental impact of every part of the process into consideration.

State of Grace for instance is a member of Greenfleet, which means the carbon emissions from their funeral cars are offset by planting trees; their coffin mattresses are made from recycled wool and calico, and the emissions from a cremation can be offset for \$10. They also use a soft cornstarch plastic inside the coffin that is fully biodegradable. On the surface all of this appears as normal – but in reality makes a big difference to the way a loved one is sent off.

Many traditional funeral directors are now also offering a number of more sustainable options, and for the person who wants to take control over the details of their own funeral there is now a company called Good Grace. With the tag-line "Don't be remembered with a warm cup of tea", they provide a 'lock-box' service, where you can record and update your burial requests – from an eco-friendly coffin, to the songs you'd like played – and distribute the password to your lockbox to close friends or family so they can access it once you're gone. ⁹¹

HANDY URLS

- www.returntosender.co.nz
contemporary & eco-friendly coffins
- www.stateofgrace.net.nz
family directed funerals
- www.goodgrace.co
record your burial requests
- www.publictrust.co.nz
Wills and funeral trusts
- www.lifedirect.co.nz/funeral-insurance
Funeral insurance
- green-funerals.co.nz
A general guide to eco-friendly funerals
- ecofunerals.co.nz
An overview of the options for sustainable funerals, caskets and burials NZ-wide
- ninness.co.nz
Wellington-based funeral director with eco/no embalming, casket and burial options
- thenaturalfuneralcompany.co.nz
Auckland and Dannevirke no-embalming funerals
- naturalburials.co.nz
Not-for-profit network of natural cemeteries around the North Island
- www.tenderrest.co.nz
Stylish eco-friendly caskets



feeling good about...

Everywhere you look, people are creating products that make a difference

Nature inspires

Sustainable artist Miranda Brown's work is inspired by nature — especially New Zealand wildlife. What's not to like about a New Zealand falcon wall-hanging?

www.miranda-brown.co.nz and www.thecleverdesignstore.com



Shave the planet

What's this? A razor packaged mostly in cardboard not plastic? So, so simple, yet so much better. Applause from us (even if the 7 billion blades are way over the top).

Gillette Fusion Proglide \$16.99



The write stuff

So it turns out writing with a toothbrush that's been upcycled into a pen is really comfortable. It's just one of the clever ideas from the folk at Terracycle, who specialise in repurposing unusual objects.

www.terracycle.co.nz



Our pick

These days when the *Green Ideas* toast gets peanut-buttered, it's with Pic's. The empty glass jars are handy around the home, and the labels come off easily after a soak. Cute detail: there's a poem by a New Zealand writer underneath each label.

Pic's Really Good Peanut Butter \$7 for 380g

Rock, paper...

Did you know you can save trees by making paper out of stone? No kidding — NZ business The Stone Paper Company Ltd have even created a fast food wrapper made from 'rock stock' that's water and greaseproof, creates no airborne, waterborne or solid waste when made, and is ECNZ certified.

www.stonepaper.co.nz



what do you feel good about?

We want to feature your favourites, too. Tell us about the products you feel good about, and we may feature them here. Email us at editor@greenideas.co.nz with 'feeling good' in the subject line.

'Feeling good about' is an editorial feature. Inclusion is at the discretion of the editor and is not paid for. If you have products you would like considered for this page, please email us at editor@greenideas.co.nz or courier your product to Healthy Life Media, 2 Des Swann Drive, Takapuna, Auckland, 1622.

gi

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Healthy Food Guide magazine
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www.healthyfood.co.nz

Available every month at Supermarkets and Bookstores

natural beauty

your fake tan plan

Veronica Schmidt looks at the pros and cons of fake-bake products



Fake tanning is a dangerous business. It's easy to end up as streaky as a rasher of bacon, as orange as a carrot, or with palms the colour your legs were meant to be.

Hannah Evans-Scott is a pro at avoiding all three. The manager of the eco-friendly Auckland salons Lucy and Powder Room offers organic spray tans and has fail-safe tips to make your home tanning job look professional. Her first rule? Never shave or wax in the 24 hours ahead of applying a faux glow. "That opens the follicles and the fake tan will get into them and make you look dotty." Next, avoid wearing perfume, moisturiser or deodorant as they can react with the fake tan. But most importantly, make sure you exfoliate. "I use a dry body brush but you can also use an exfoliating mitt," Hannah says. "The tan will go on better and last longer."

Now to the issue of what might be lurking in your fake tan. The ingredient that creates colour is Dihydroxyacetone (DHA). It can be made from sugar cane or beet sugar, or by fermenting glycerine, and is considered safe for external use – though some question whether it's safe to inhale, or absorb through mucous membranes.

But then who would eat or snort fake tan, you ask? Who would rub it in their eyes? No-one, of course – yet think about that fine mist that fills the air at a spray tanning salon. Experts can't reach a consensus on whether that's a safe or sensible way to apply fake tan.

The British Cosmetic, Toiletry & Perfumery Association goes by the word of an independent panel of scientists who say there is no risk in a salon environment. However the US Food and Drug Administration (FDA) says the beauty industry has never asked it to look into the safety of DHA for spraying, which means it hasn't been fully assessed and shouldn't be used near eyes, lips or mucous membranes.

The upshot? It's probably safe but if you want to veer toward the side of caution use a cream, lotion, gel or mousse tanning product. Or, if you want to keep going to your favourite salon, take the precautions recommended by the FDA: wear eye protection, nose filters (you can buy these online) and underwear and create a barrier for your lips by applying balm or Vaseline.

And don't forget to check your fake tan's other ingredients before you use it. Many include unnecessary synthetic fragrances, preservatives and skin conditioning agents. There are, however, plenty of gentler, environmentally-friendly products out there – and even a few organic ones to boot.

Veronica



natural tanning lotions to try...



Brown All Year
chocolate tanning spray
\$23.50 for 100ml



Trilogy
instant bronzing gel
\$25.90 for 100ml



Eco Tan
invisible tan
\$39.95 for 150g

Search for 'smarter sunscreen' at www.greenideas.co.nz
for reviews of the safest sunblocks

Some other new green products...

Derma Sukin daily gentle wash

\$14.50 for 250ml
www.dermasukin.com

"It's hard to get everything you want in one product but when you have sensitive skin, want to be good to the environment and need the darn potion to work it can be an uphill battle. This cleanser, by the dermatologist-certified line of popular natural Australian brand Sukin, ticks all the boxes."



Eco credentials: Derma Sukin is a certified carbon neutral company and all of its products are biodegradable and grey water safe. Certified vegan the wash is plant-based and free of hazardous chemicals.

human+kind anti-ageing cream

\$49.50 for 50ml
www.humanandkind.com

"This is a cream for the multi-tasking, clutter-hating, no fuss kind of gal. It's an eye cream, wrinkle cream and moisturiser in one. Smear it all over your face and you're done. It's rich going on but soaks in easily so you can apply make-up over the top a few minutes later."



Eco credentials: An Irish company, human+kind formulates all of its products without petrochemicals and does not test on animals.

Natural Instinct is the truly family friendly range of natural skin and hair care.

Natural Instinct is so natural that it is safe to use for the entire family. All our products are **not** tested on animals, are **vegan** friendly and are packed in **recycled** packaging.

So while many brands claim to be 'natural', Natural Instinct sets the standard by being the only brand that excludes over 400 ingredients that are proven harmful to you and the environment.



**NATURAL
INGREDIENT
STANDARD**

It's our unique method of balancing carefully selected naturally plant derived ingredients, while excluding hundreds of potentially harmful chemicals.

FREE FROM:

Sulphates, Petrochemicals, Parabens and PEGs, Artificial Fragrances & Colours, Harmful Chemicals, Animal Derivatives, PABA and EDTA, Mineral Oils and over 400 potentially harmful ingredients to you and the environment.



natural
instinct

SO NATURAL YOU COULD GROW IT

www.naturalinstinct.co.nz

Available in Pharmacies & Health Stores Nationwide.

Natural health & beauty is an editorial feature. Inclusion is at the discretion of the editor and is not paid for.

If you have products you would like Veronica to review, please email us at editor@greenideas.co.nz or courier your product to Healthy Life Media, 2 Des Swann Drive, Takapuna, Auckland, 1622.

STEP-BY-STEP preserving fruit

Think preserving sounds hard? Kelly Gibney explains a simple method that will turn you into a preserver to make Grandma proud



Preserving can sound tricky and time-consuming, yet is surprisingly quick and easy. Learn a few basics and before long you'll be enjoying the delicious bounty of summer all year – while saving a tonne of money and avoiding pointless packaging waste.

You can preserve a glut from your garden, or simply buy and preserve fruit when it's cheap, to be enjoyed when it's expensive (and imported). You don't even need to do great batches at a time; you can preserve a single jar simply to rescue a fruit bowl that threatens to go off before being eaten.

There are lots of different techniques for preserving, but the basic principles remain the same. Jars are heated to kill bacteria and other bugs that can spoil the contents, and the produce is also heated so that it expands. Once the lid goes on, the contents are allowed to cool and contract, which sucks the lid tightly on to the jar, forming a seal that lets you to store it at room temperature for long periods.

There are several methods for preserving but I'm going to walk you through the 'open pan' or 'overflow' method that requires no special equipment beyond jars and lids, and is excellent for small batches. ➔

YOU'LL NEED...

- 2 kg **apricots, peaches or plums**
- 2 cups **sugar**
- 6 cups **water**
- A **large pot**
- 2-3 500ml **preserving jars**
- **Jar seals and rings**

CHOOSING FRUIT

Select fruit that is neither too ripe nor completely under-ripe. It should be at a stage where you would want to eat it. Because you are cooking it there is a little leeway, but bad fruit cannot be disguised.

WHAT KIND OF JARS DO I NEED?

You can reuse old jam jars for preserves that use plenty of vinegar, but for fruit it's best to invest in proper preserving jars, which have lids and screw-on rings. The jars are around \$4-\$5 each new, but endlessly reusable. Rings can also be reused, however lids are single-use. Lids and rings can be bought cheaply at most supermarkets.

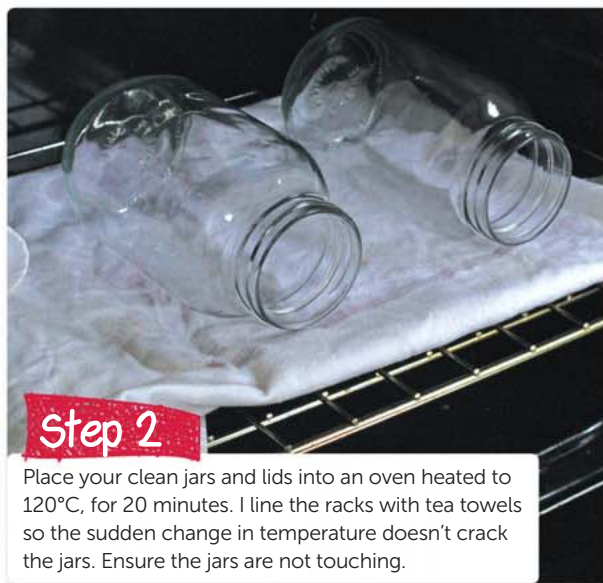


FRUIT IN LIGHT SYRUP



Step 1

Prepare the fruit by washing and then cutting into halves or quarters and removing the stones.



Step 2

Place your clean jars and lids into an oven heated to 120°C, for 20 minutes. I line the racks with tea towels so the sudden change in temperature doesn't crack the jars. Ensure the jars are not touching.



Step 3

Place the sugar and water in a large pot on the stove and heat until simmering. Add the fruit and cook until tender (but not mushy).



Step 4

Heat a dish with hot water so it's not cold enough to shock the jars, then use tongs or oven mitts to pull them out of the oven and place on the dish. Use a clean spoon to fill jars with the very hot cooked fruit.



Step 5

Top with syrup to the very brim. Slip a chopstick or thin flexible knife down the side of the jar to release any air bubbles and quickly top with syrup until just overflowing – the dish will catch your overflow.



Step 6

Carefully place the seal on the jar and then screw the ring down tightly. Once the jars have cooled completely you can wash any residual syrup off the outside. Now label and date your jar and place in the pantry to enjoy at a later date.

BONUS RECIPE


Slow cooked tomato sauce

This rich and glossy tomato sauce can be used as a base for stews, and is great with pasta or used as a pizza sauce. It needs to be preserved using the water bath method explained in the box below

YOU'LL NEED:

- 3 **onions** – peeled and finely diced
- 10 cloves **garlic** – finely diced
- 3kg ripe **tomatoes** – a variety of types and sizes is fine
- 5 teaspoons **salt**
- 3 tablespoons **brown sugar**
- 4 tablespoons **red wine vinegar**
- **Olive oil** for sautéing onions and garlic
- 1 tablespoon **lemon juice** per 500 – 700ml jar
- Optional: 2 handfuls **fresh basil** or oregano – roughly chopped

METHOD:

- 1 Sauté onions and garlic in olive oil until tender and translucent.
- 2 Add remaining ingredients and simmer very gently for 1½ hours stirring regularly. You want the sauce to cook down to a rich and glossy consistency.
- 3 Once finished add the fresh herbs if using. Use a stick blender to get a smoother consistency if you wish.
- 4 Sterilise jars in an oven as per Step 2 on page 36. Put 1 tablespoon of lemon juice into each clean jar.
- 5 Use a ladle or funnel to fill jars. Place seal and then lid on. Process using the water bath method (see box) for 35 minutes.
- 6 Set aside to cool, before labeling and storing. 



WATER BATH PRESERVING

This method uses a water bath with a lid into which you place jars filled with the fruit or vegetables you want to preserve. The jars are then boiled for a fixed time depending on what's inside – often this is what cooks the contents. This method is perfect for those wishing to take up preserving more regularly as it yields very consistent results and is great for large batches. Check out Trade Me to purchase second-hand water baths, or alternatively use a very large pot with a wire rack placed in the bottom. You will be able to buy new from specialty kitchen stores.

For more recipes for your summer harvest, search for 'garden glut' at www.greenideas.co.nz

13 tips for choosing a fridge or freezer

They're an essential part of a modern home, and a boon for affordable, sustainable living too: a good freezer lets you store produce from your garden, or buy cheap fruit and veges during summer for use in winter, which saves you loads of money and avoids excess packaging. Yet not all fridges and freezers are created equal. So if you're buying a new unit, or disposing of an old one, check out our top tips first.

**1**

Cool costs

Chilled water and ice makers are a feature of many freezers, but they add considerably to the price (\$500-\$800-plus) and use a lot of the freezer's volume, typically costing you 15-25 per cent of the space. Potentially expensive plumbing may also be required.

**2**

Going large?

Before you buy a big 600-800 litre side-by-side fridge-freezer, make sure you have enough room – you'll need a 5cm air gap all around, plus room for the doors to fully open. And make sure it will fit through your doorways!

3

Post 2010 is better

Usually buying gear second-hand is a greener, cheaper thing to do – but that's not always true with fridges and freezers. Modern units (from the last 5 years) are much more energy efficient, so an older model might be cheaper upfront, yet cost you more in power bills over time. Like all larger appliances, fridges and freezers are rated for energy efficiency, and range from one star to four – with four being the most efficient. However the rating system was toughened up in 2010 reflecting improved refrigeration technology and insulation. So a 2008 four star model has become only two stars in 2011. Compared with a pre-2010 model a new four-star side-by-side fridge-freezer will save around \$60 on your electricity bill each year – that's \$600 over 10 years.

Tight budget?

Decide how much refrigerated space you really need. Around 100-125 litres per person is a good rough guideline.

5

8

6

Wide on the wallet

Side-by-side fridge-freezers tend to be significantly more expensive than vertically stacked units.

7

Steel yourself...

Stainless finishes look cool, but cost \$100–\$1000 more than white (and will make your kitchen seem darker).



4

Bigger can be better

You can get bar fridges as small as 45 litres, however smaller models are relatively expensive and energy inefficient. For example a 45 litre model costs \$250 and uses 250kWh of power per year. By comparison, you can get a 421 litre Panasonic fridge-freezer for \$1460, which will use 413kWh. Yes, that's around six times the cost – but you get nine times more room inside, for less than double the annual electricity cost.

Reliability

Surveys by *Consumer* magazine found that 89 per cent of fridges and freezers never need repair. Vertically stacked models are more reliable than side-by-side models, and the most trouble-free brands are Mitsubishi, then Westinghouse.

THE MOST ENERGY EFFICIENT MODELS CARRY BLUE ENERGY STAR STICKERS.



Solar sense

If you are generating your own solar power, use a timer switch to turn your appliances off for a few hours at night and run them during the day when you are generating free electricity. Modern fridges and freezers are so well insulated that you can save money this way, without the contents coming to harm.

10

Smarter power

Smart electricity meters are currently being rolled out around the country, with 1 million already installed. These allow real-time measurement of the power you consume, so power companies will soon start charging you different rates at different times. This means you'll be able to save on your power bill by using a timer to switch off the freezer for a few hours when power's expensive.

Power generated at peak times – in the evening on cold nights, for instance – costs more to generate because it comes from burning gas at power stations such as Huntly. So switching off briefly will save money and reduce your carbon footprint.



11

Safe disposal

In Auckland, Wellington and Christchurch, Fisher and Paykel (0800 372 335) will pick up your old fridge of any brand for free. They will remove refrigerant gases and recycle all other components. Old freezers and refrigerators contain chlorofluorocarbon gases (CFCs) which, when released to the atmosphere (usually when the unit is dumped) remain in the air for a long time, where they destroy our protective ozone layer – and some also have a potent greenhouse effect. Modern refrigerants do little or no damage to ozone, however some are still mild greenhouse gases, so they should also be properly disposed of.

12

Other disposal options

In the greater Auckland area, the Tamaki Sports Academy (09 267 0328) fundraises by freely collecting any old metal, (including fridges, freezers, engines, lawnmowers, stoves and other appliances – though not TVs). Councils will often take refrigerators in inorganic collections, or you can take them to transfer stations, ecodrops and the like – although there may well be a charge of around \$25. Inorganic collection material often ends up in landfills, and there is valuable metal in appliances which can be usefully recycled, so recycling disposal is far preferable. 

See www.greenideas.co.nz for 11 surprising green ways to use your freezer

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A large, two-story house with a white balcony and a garden. The house has a grey roof and white walls. The balcony is white with a decorative railing. The garden is lush with green plants and red flowers. The house is surrounded by trees and a stone wall.

cityserenity

With its pond-like natural swimming pool, this stately property is a surprising slice of countryside in the heart of Auckland



WORDS: GREG ROUGHAN PHOTOS: JOANNA WICKHAM



Family dog Elfie patrols the garden while kingfishers scold from above.

When Susan and Steve Hirst saw that the house next door was up for sale, they decided the opportunity was too good to be missed. The home in Grey Lynn, Auckland, was blessed with an unusually large block of land – almost 3000sq m sloping gently to the sunny north – and an ageing orchard of assorted fruit trees. Buying it would give the Hirsts a rare chance to create a garden retreat in the heart of the city; it would also protect the historic homestead from the very real possibility of subdivision. The couple made an offer – it was accepted – and the family moved in during 2010, dog, chickens and all. ➔



On a warm day the air hums with the sound of bees that are drawn to the colourful flower beds.

HOME & LIVING

A walkway separates the shallow growing beds in the pool from the deeper swimming area, though fish are free to move between the two.



Steve's chooks enjoy a spacious run, turning any garden surplus into fresh eggs.

Gardening with nature

The house is a well-known local landmark thanks to its unusual concrete construction. Built around 1887, the stately old home is one of four concrete villas built by the Warnock family above their soap and candle factory down the hill.

Despite the grandeur of the place the surrounding land had seen little work. With just a sloping lawn and ancient orchard, the large section presented a virtual blank canvas, so Susan and Steve immediately set about creating a slice of countryside in the city.


Five years later they are now able to step back and literally enjoy the fruits of their labours: the rescued 100-year-old plum trees are now bursting with fruit thanks to pollinators drawn to the overgrown bee meadow that surrounds them. Rustic flower beds give a countryside feel that balances the formality of the home. Extensive edible gardens drop in terraces down the slope next to a long chicken run for Steve's 'girls'; and a chlorine-free natural swimming pool provides a home for native reeds, darting dragonflies and even fish.



What is a **natural pool**?

One of the most striking additions to the property, the pool offers a surprising mix of clean, inviting swimming water with lily-dotted shallows where goldfish cruise.

Abraham Brenner of Pool Environments, who completed the pool's design, explains the delicate balance that lets you take a dip without the need for chlorine clinging to your skin. One system of pumps mechanically filters the water for clarity, while another takes water from the pool's edge and into a 14,000 litre reservoir below ground. An ozone treatment then kills any potential nasties such as giardia, before a UV light breaks the ozone into harmless O₂. From there the water is pushed back up through layers of rock and gravel for a final filtration before it meets the roots of plants, including water lilies, irises and native reeds, which extract enough of the nutrients in the water to discourage algal growth.

As Abraham puts it, maintaining the delicate balance between water clarity and plant life in a natural pool takes thought and care – “if you want a sparkling blue pool, just build a sparkling blue pool”, he quips – but for Susan and Steve, the pleasure of the environment they've created has been worth the effort. 

A kauri cottage that Susan and Steve repiled and relocated is a prime seedling-raising spot, and the place the pair gravitate to for a rest after a day in the garden.



STEP-BY-STEP

turn a door into corner shelves

These clever space-saving shelves are simple to make. Dave and Stella Lennox show us how

Junk shops are full of battered old doors, which are easily upcycled into shelves that will become a talking point in your home. The more rusticated the door, the better – this will give the unit a lot more character!

YOU'LL NEED:

- A solid **wooden door** (give it a good clean with warm soapy water before you start)
- **Wood** for the shelves (plywood or similar)

TOOLS REQUIRED:

- Tape measure
- Pencil
- Skill saw
- Drill / screw gun
- Screws
- Paintbrush & paint

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For more upcycling projects go to www.greenideas.co.nz



Step 1

Measure the width of your door to establish the middle point. Mark the centre with a pencil.



Step 2

Measure the width of door edge and offset this measurement from your centre point (in our case, 40mm). Mark a line the length of the door; this is the line you will cut along.



Step 3

With your skill saw, cut the door vertically into two pieces along your marked line. One piece will be wider than the other.



Step 4

Lay the wider side of your door flat on your workbench and place the narrower piece on top at a 90 degree angle (if you use the corner of your shelving timber as a guide to getting the angle right, it will save any trouble later). Screw the two pieces together, top, end and bottom.



Step 5

Now make the shelves. These look best slightly inset, so stand the unit upright and measure in about 30mm from each side of the unit, and mark with a pencil.



Step 6

From your pencil mark, measure the distance to the back of the unit on both sides – take note of these measurements.



Step 7

Mark two points on the edge of your shelving wood using the measurements taken in Step 6. Drawing a line between these two points, then cutting along it, will give you a triangular shelf. Cut as many of these as you like (we made four).



Step 8

Hold each shelf in place and screw into the unit from the back. Repeat for all shelves.



Step 9

Now paint your door and shelves. We went for a rustic country look, but this is where you can get creative with colour.

HOME HANDYMAN

how to install a low flow shower

A low-flow fitting inside your shower is simple to install, and saves water and electricity, without compromising comfort. Eco design advisor Eion Scott shows us how

Hot showers account for a quarter of the water used in the average home and up to a third of energy, so the bathroom is a great area to target for savings.

Mains pressure showers typically use 12-15 litres of water each minute – so even a short shower can use a lot of water, and most of it hot.

If you're upgrading, it makes sense to buy water-efficient showerheads,

taps and toilets. Check out the water rating label – it looks like the energy label you see on fridges, but has blue stars instead of red. Go for a minimum of 3 stars; 4 is better.

However if you don't need to replace your existing fittings, you have another option: installing a cheap device that restricts the flow. This means you get much the same experience in the shower, yet use much less water.

SHOWER OR BATH?

A five-minute shower uses a lot less water than a bath. But if you want a long relaxing soak, then a bath is more efficient than a half-hour shower

Eion Scott is an eco design advisor at Auckland Council. See www.aucklandcouncil.govt.nz/ecodesign for more

WHERE DO I GET THEM?

Shower restrictors and tap aerators can be purchased for \$10-\$20 from hardware stores or Environment Centres (in Auckland, that's the Sustainable Living Centre in New Lynn).

If your water is metered, you will almost certainly recover this cost in your water bills – usually within six months.



Step 1

Check the flow rate on your showers and taps, by running it into a bucket or measuring jug for 10 seconds. If there's more than 2 litres, you have a wasteful fitting.

Step 2

Check whether the hot water cylinder is mains or low pressure. Low pressure cylinders are generally copper; high pressure will be steel. If it's low, there shouldn't be a need to change the showers and taps – they're already water-efficient. And you should be careful not to install anything to change the hot water flow in a low pressure system, as it could damage the cylinder.



Step 3

You can reduce shower water use by a third or more by installing an inexpensive shower flow restrictor. Just unscrew the hose or fixed showerhead from the wall and insert the restrictor (but make sure it's the right way around!) Check instructions as various products differ.



Step 4

For your kitchen and bathroom mixers you can install a flow-reducing aerator. Unscrew the old mixer aerator and replace with the new flow-reducing one. Some kitchen mixer aerators come with a handy swivel mount, and a push-pull system to change from a stream to a spray position – great for rinsing plates.



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home hydroponics

Hydroponics systems can be a great way to grow your own fresh greens, herbs and vegetables, writes Janet Luke



A couple of years ago I was lucky enough to visit a restaurant in New York called Bell, Book And Candles. This place was experimenting with growing their fresh produce – greens, herbs and vegetables – hydroponically on the rooftop of the restaurant building, way up in the Manhattan skyline. The two forward

thinking chefs John Mooney and Mick O'Sullivan had created an edible oasis in the middle of the concrete jungle. Now the majority of the vegetables and herbs served there are grown in 60 hydroponic towers on the rooftop. A nifty bucket and pulley system delivers the produce to the kitchen.



PLANTS THAT GROW WELL HYDROPONICALLY

- Lettuce
- Rocket
- Spinach
- Swiss chard/silverbeet
- Cherry tomatoes
- Capsicum

Herbs

- Basil
- Chives
- Dill
- Thyme
- Catnip
- Oregano
- Marjoram
- Parsley
- Stevia
- Mint



PLANT COMBOS THAT GROW WELL TOGETHER

The following groups require similar nutrient (EC) levels to grow successfully in a hydroponics system

- Beans, spinach, brassicas, celery, tomatoes, strawberries
- Parsley, peas, radish, rhubarb, cucumber, leek, spring onion
- Basil, lettuce, mint, thyme, borage, chives, watercress

How it works

Essentially hydroponics is the practice of growing plants without soil. The plants are grown in a nutrient-rich solution and small stones, pumice or clay balls give the roots something to anchor to. A small hydroponic system can be easily designed to fit into any small urban space such as a balcony, veranda, rooftop, courtyard or even windowsill. They can also be set up completely indoors in dark rooms – but the harvest from these is normally considered illegal!

Once set up the system only requires some quick daily monitoring. The plants normally grow very rapidly and the foliage is lush.

Evangelical greensies don't consider a hydroponic system to be organic, as the plants are not grown in soil. I just think it is great if someone is growing some of their own food, whatever the system – and of course any home grown food avoids lots of unnecessary packaging and food miles. A system can also be designed using recycled plastic bottles or buckets. ➡



Hydroponics – the nuts and bolts

• A hydroponic system uses a small pump to move a specialised nutrient solution around a system to feed the plants' roots. It is important that the solution is moving so it also provides oxygen. By using a simple timer, the pump can be operated at a minimum to conserve energy. On the system I have at home I've programed my pump to operate for 15 minutes every 3 hours over a 24 hour period.

• The nutrient solution is either made from a precise mix of chemical nutrients or can be organic – made from seaweed for instance, or even bat droppings. These solutions can be bought at most garden centres or specialised hydroponic shops. I have been experimenting with using only liquid from my worm farm and found that the growth is adequate and the plants remain healthy.

• The growing plants need something to anchor their roots into and rockwool is a widely used material for this. This material is made by melting and then spinning a combination of rock and salts. The end result looks a little bit like candy floss. It is light, and retains water and oxygen so is perfect as a substrate for roots.

• Young plants have their roots cleaned of any soil particles and then planted into these rockwool squares. It is important to wash the plants' roots clean to prevent soil particles clogging the system and to stop soil-borne diseases being introduced.



• The level of nutrients is critical and varies with the different types of plants being grown in the one system. For example tomatoes require a more concentrated solution than lettuce. For this reason it is a good idea to grow plants with similar requirements together.

• The solution is often measured as EC, which stands for the Electrical Conductivity. An EC meter applies a small voltage to the solution to read the conductivity that is produced by the movement of mineral ions. This all sounds very technical but this is just a way of checking that there is enough nutrient for the type of plant growing.

You can buy a special digital meter which reads levels when you dip the end into the solution. Interestingly, if you are using an organic-based nutrient solution these meters can't read the levels. I found this out the hard way after pouring a whole bottle of organic nutrient into the reservoir tank trying to get my readings up to the correct level.

germinating seeds in rockwool



CARE AND MAINTENANCE OF HYDROPONICS

- Change your nutrients at least every three weeks. You can drain the used fluid and use on your garden or pot plants
- With an automatic timer you can set the pump to only go for a few minutes every hour, saving on power
- At the end of each growing season, rinse and clean the unit using fresh water and a weak solution of bleach. Replace the rockwool after each cleaning

PLANTING NOW FEBRUARY & MARCH

Hot dry settled weather is the hallmark for this time of year. It is important to keep up regular watering. If plants become water stressed they will bolt to seed. Ensure you have a thick layer of mulch covering any bare soil and tucked in around your plants. This will help to deter weeds and retain soil moisture. You can plant all of these now:

- Beetroot
- Leek
- Mesclun greens
- Lettuce
- Brussels sprout
- Spring onion
- Broccoli, cabbage, cauliflower



HOW TO MAKE...

A fizzy-drink hydroponic planter

This is a very simple project that's perfect for the kids on a rainy weekend. The system does not use any power and is small enough to sit on any windowsill or bench. It doesn't require any specialised or expensive equipment or tools. It could easily grow herbs, flowers or small vegetables. Making one could be a good way of finding out if you like hydroponic gardening before you build or buy a larger system. Choose a small plant or herb as anything larger will topple the bottle over.

YOU'LL NEED:

- A 2 litre **plastic fizzy drink bottle**
- 1 cup of **hydroton pellets**, pumice or small gravel
- **Hydroponic nutrient solution** (buy at garden centre)
- 4 plastic **drinking straws**
- A roll of **tape**
- **Stanley knife**
- **Pen** to mark bottle
- A **seedling** of your choice



METHOD:

- 1 Wash bottle with clean, warm soapy water
- 2 Measure 10cm down from the neck and mark evenly around the circumference of the bottle with the pen
- 3 Cut the bottle in two at this mark with the Stanley knife
- 4 Cover the cut edges in tape
- 5 Invert the top section of the bottle and insert it into the base
- 6 Insert the four straws in two groups either side of the bottle and between the two sections. The straw ends should reach inside the bottle nearly to the base
- 7 Place a large pebble or stone as a bung in the neck of the funnel
- 8 Fill the top funnel part of the bottle with the hydroton, pumice or gravel
- 9 Carefully wash any trace of soil from the plant's roots and then carefully plant it into the stones, coaxing the roots down towards the neck
- 10 Following the dilution instructions on the bottle fill the base with nutrient solution so it reaches the neck of the top section
- 11 Twice a day blow into the straws. This oxygenates the nutrient solution, and ensures that moisture is reaching the root hairs
- 12 Soon the roots of the plant will grow down the inverted neck and sit in the solution – top up solution as required



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Garden ideas

tyre tower potatoes

Growing spuds inside a stack of old tyres is an old trick for boosting your yield from a very small space. Jo Clements shows how it's done

YOU'LL NEED...

- Some **seed potatoes** (found at garden centres, or for heritage varieties, see www.koanga.co.nz)
- **Soil**
- **Two or three old tyres** (most tyre dealers will happily give you old ones for free; 2-3 are ideal)
- **Cardboard** or newspaper
- **Plastic sheeting** for lining (optional)
- **Water**

GETTING THEM STARTED

Chitting seed potatoes – getting their sprouts growing before you plant them out – gives them a head start, but is optional. To do this just leave in a dry spot, away from direct sunlight, until sprouted.

Step 1

Place a tyre in a sunny spot – if planting on to grass, place a piece of cardboard underneath the tyre.

Step 2

Cover the cardboard with an even layer of earth, compost or a combination of both. Some people worry about the tyre rubber breaking down or affecting the soil – if this is a concern, you can line the sides with plastic sheeting (make sure there is drainage at the bottom).



Step 3

Place potatoes evenly on the earth. Don't be too concerned with which way up they go – the shoots will find their way upwards.



Step 4

Cover potatoes with a good layer of earth. Water thoroughly and frequently, particularly if the weather is hot. Avoid wetting the foliage once sprouted.



Step 5

When the potatoes sprout and the green tops are above ground add another tyre and some more soil. Leave a small amount of foliage exposed at the top.



Step 6

Replenish the nutrients in the earth by mixing in comfrey leaves (pictured), compost, weed-free straw and rotted animal manure.




Step 7

Tubers grow from the covered stems of the plants, so repeat Step 5 as the plants gain height. In warm areas potatoes grow all year round but still watch out for frost – if you think it will freeze overnight prevent damage to the leaves by covering them with cloth or newspaper.



Step 8

Early potato varieties are ready within 3-4 months; they are not the best for storing so eat soon after harvesting. Main (late) varieties typically take 4-5 months; these are ready once the foliage has withered. For better storage, leave main crop varieties on the soil to dry for a couple of hours. 

ONE MINUTE SKILLS

making dummy butterflies

Keep your brassicas safe with these fun 'butterfly scarecrows' from Fabian Capomolla and Mat Pember's book, *1-Minute Gardener*

Of all the pests in the garden the white cabbage moth is one of our primary nemeses, and funnily enough it is often confused for and admired as a pretty white butterfly roaming the garden. Oh, the irony!

It is not the moth itself that is doing the damage but the moth larvae. These camouflaged green caterpillars have huge appetites for your sweet brassica crops and leafy greens. A happy patch can quickly turn ugly – full of these mini monsters spoiling your hard-earned crops.

One avenue is the physical barrier – setting up fine netting over your garden – but another preventative measure, and one that allows you to get your craft on and involve the kids, is making dummy butterflies. Thankfully, while the white cabbage moth larvae are incredibly destructive with huge appetites, the moths are territorial, mostly blind and a little stupid, so bits of plastic dangling on wires can be enough to keep them at bay.



1 Our crafting tools: plastic shopping bag, thin wire, thick wire, scissors and tin snips

2 Cut strips off the plastic bag to make the butterflies. You want 10–15cm lengths that are about 3cm in width



3 Create the butterfly body by pinching the middle of the plastic and securing with the thin wire. Can't believe how lifelike they're already looking!



4 Trim the wings to make them round



5 Cut some 40–50cm lengths of the thicker wire – probably best not to let the kids play with the tin snips – and attach butterflies to them



7 Hmm, don't think it's worked. Still white cabbage moths everywhere. Or are there?



6 Get the kids to help you place them around the patch where the larvae have been causing trouble. There is safety in numbers, so put a good few in and set the vibe



**WORTH
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Green Ideas has one copy to give away. Go to www.greenideas.co.nz to enter

Competition closes Monday April 6

The *1-Minute Gardener* by Fabian Capomolla & Mat Pember, published by Macmillan. RRP \$49.99.
© Fabian Capomolla & Mat Pember

eco friendly fertilisers

Soil scientist **Andreas Kurmann** checks out some of the natural fertiliser products on the market

A good gardener takes a lot out of their patch in the form of healthy, nutritious food – so it's important to put something back in. A feed of fertiliser ensures plants are strong, disease-resistant, and productive – yet there are good reasons to avoid the usual chemical products.

Few people realise that healthy topsoil is teeming with fungi and bacteria – a cubic metre of healthy soil contains more than 1kg of fungal threads – and the fungi in particular help plants by attaching themselves to their roots. These fungal threads penetrate deep into the soil, drawing up nutrients and water which they give to the plants in exchange for a feed of carbs. Essentially they greatly extend a plant's root system.

However synthetic fertilisers can inhibit the reproduction of these helpful microorganisms, making your soil less fertile over time – and dependent on its next dose of chemicals for its vitality, instead of being naturally self-sustaining.

Over-application of fertilisers is also one of the main reasons rivers and lakes in New Zealand are turning toxic. If you use more nitrogen and phosphorous than your plants can take up it will simply wash away in the rain and find its way into waterways. There it encourages rampant algae growth which kills other aquatic life, turning the water into a slimy wasteland.

What are the **options?**

The good news is you can replenish your soil and feed your plants with a range of more natural fertilisers. These all contain the three basic nutrients, nitrogen (N), phosphorus (P) and potassium (K) found in regular products, but may also deliver micro nutrients such as silica, sodium and selenium. These and other micro nutrients aren't often displayed on fertiliser packages despite arguably being just as important. Ultimately a natural product should promote a healthy, living soil system that will be more fertile in the long run.



What's available?

We checked out six fertilisers or soil conditioners available in New Zealand that were made from natural materials. Their ingredients and strength vary, but all will give your garden a boost.



Yates Dynamic Lifter

2.5 kg for \$7.99

Value for money: 32 cents per 100g

Certified organic? No

NPK: 3.2-2.6-1.3

Made from composted chicken manure, blood and bone, fish meal and seaweed, this product comes in pellet form for easy application. Because the ingredients are attractive to animals such as dogs you need to rake some soil over the pellets and water them in well after applying – contact a vet if your animal eats some. Adequate levels of nutrients but low in potassium. Apply every second month in the growing season.



Tui Blood & Bone

2.5kg for \$9.95

Value for money: 38 cents per 100g

Certified organic? No

NPK: 7-4-0

Provides slow-release nutrients, with a good dose of phosphorous for strong roots and flowers – but lacks potassium. Literally made from blood and bone, this should not be spread anywhere that grazing animals such as sheep, cattle, deer or goats could eat it. Apply every second month in the growing season.

UNDERSTANDING N-P-K

There are three main elements that plants need for growth: **nitrogen** (N), **phosphorus** (P) and **potassium** (K). Put simply, nitrogen is needed for leafy growth, phosphorus for good roots and flower formation, and potassium is needed for overall health plus good flowers and fruit.

The packaging of any fertiliser product will display how much of each element is present as a percentage of the total volume. So for example something that says NPK: 8-3-6 has 8 per cent nitrogen, 3 per cent phosphorus and 6 per cent potassium.

In New Zealand most soils are low in available potassium, so it is essential to supply it regularly to the garden. A minimum of 3.5 per cent to 6 per cent K is required for healthy plant growth.

A newly established garden will also benefit from added nitrogen. However, once established, a healthy soil system with lots of fungi – and worms to aerate it – should draw enough nitrogen for its needs from the air. You should only need to add nitrogen at times of very rapid growth.

N, P and K are only part of the picture though – dozens of other elements are needed in smaller quantities. If you're a serious gardener, farmer or orchardist then consider getting your soil analysed to work out the precise requirements of the property.

Fodda General Fertiliser

4 kg for \$16.50

Value for money: 41 cents per 100g

Certified organic? Yes

NPK: 1.5-4-5

Made from ground-up phosphate-bearing rock, fermented fish waste and seaweed, plus charcoal, coffee grounds and sawdust, this product encourages soil biology, while delivering a good dose of phosphorous and potassium for healthy roots and fruit. Also lists levels of important secondary nutrients such as calcium, and says 80 per cent of the ingredients are diverted from landfill. Apply 100g per m², with extra at the base of trees, and repeat after 8 weeks.





Biofeed

500ml for \$9.99

Value for money: \$2.00 per 100ml

Certified organic? Yes

NPK: Not stated

Brewed from hot composted animal manure and hay, this 'tea' fertiliser should be diluted (50ml per litre of water initially, then 20ml/litre thereafter) before being applied to the soil around plants. No information on nutrient levels is given. Liquid fertilisers should be applied more regularly than solid products – fortnightly-to-weekly – as plants absorb them more readily, and rain and watering wash them away.

Seasol

500ml for \$11.95

Value for money: \$2.39 per 100ml

Certified organic? Yes

NPK: 7-0.8-5.4

A concentrate brewed from seaweed, this Australian product is designed to be added to the watering can by the capful – about 3ml for every litre. Provides a quickly absorbed feed, with good levels of the major nutrients, especially potassium for disease resistance. Once mixed, should be used within 24 hours as it will begin to break down. Apply every 2-4 weeks.




Yates Nitrosol

500ml for \$16.98

Value for money: \$3.40 per 100ml

Certified organic? No

NPK: 8-3-6

A concentrated liquid made from animal blood and bone, this delivers high levels of all the major nutrients for rapid uptake. Should not be spread anywhere that grazing animals such as sheep, cattle, deer or goats could eat it. Dilute in water at 5ml per litre and soak into the soil around plants every 7-10 days. Once mixed should be used within 24 hours as it will begin to break down. 



ABOUT THE WRITER



Andreas Kurmann is a Swiss-born scientist who now operates the soil testing facility Far North Envirolab Ltd. He speaks regularly on the topic of fertiliser, soil fertility and nutrient retention.

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Note: Andreas is part-owner of Tuturu Products Ltd, the maker of the Fodda product mentioned in this story.



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10 things

we learned while making this issue

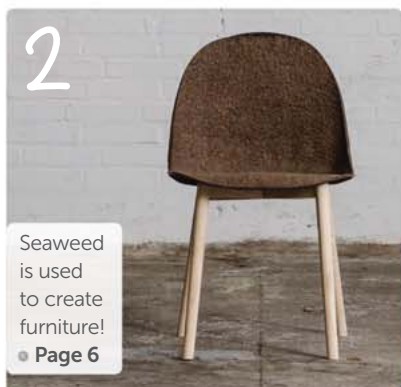
From seaweed to swimming pools, we came across some great green ideas as we made this magazine

1 You can make your own hydroponic planters from plastic bottles
● Page 50



2

Seaweed is used to create furniture!
● Page 6



3

Natural swimming pools use plants instead of chlorine to clean their water ● Page 42



4

The active ingredient in fake tanning lotions is derived from beets ● Page 32



5

Dental fillings release mercury into the environment during a cremation ● Page 26



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The company Terracycle turns old toothbrushes into pens! ● Page 30



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Waste that goes into sink disposal units generally ends up in landfill ● Page 16



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White cabbage butterflies can be scared off with 'butterfly scarecrows' ● Page 56



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Fridges and freezers made since 2010 are much more efficient ● Page 38



10

'Compostable' plastics won't break down unless the compost is hotter than 60°C ● Page 22



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